

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.





LIBRARY  
SEP 26 1923  
Department of Agriculture



# Floral Culture

—BY—  
**MISS C. H. LIPPINCOTT**  
MINNEAPOLIS, MINN.

The Pioneer Seedswoman of America

JANUARY, 1902

## THE FLOWER GARDEN.

The flower garden should be a part of every home, and the many easy-grown and free-flowering annuals render it an easy task as well as a pleasant one for all home-loving women to have a small garden successfully. Floral Culture will do its best to tell the amateur how to plant and care for seeds.

### ANNUALS

That flower from seed the first season, are, taken all in all, among the best of flowers which can be used for the decoration of the gardens of the people; and a great many choice varieties may be bought for a little money, and they are from first to last not only easy of culture and sure of growth, but they produce gorgeous masses of the most lovely flowers imaginable; the blossoms include forms of the most peculiar shape, all shades of colors and exquisite fragrance.

### THE SOIL FOR ANNUALS.

If there is anything important in flower culture, it is the thorough preparation of the soil. The seeds of a majority of our flower annuals are very small indeed, so it is doubly necessary to work the soil finely. Otherwise the small seeds, falling into air spaces and interstices of the soil, find no contact with the earth upon all sides. Hence germination is retarded, or often entirely prevented, and the sower of the seeds waits and waits for results that never appear, and very likely blames the seed seller for the trouble. One great essential in fining the soil is to have it dry, not wet and soggy. If in latter condition, it can never be made right. A permanent injury is effected by working the ground too early. Lumps and cakes are formed which prove troublesome all the season. So never attempt to save time by beginning work too early. Wait by all means until the ground is warm and dry. Then spade carefully, breaking all lumps and turning the soil over. Finish the job with an iron rake. This is a splendid tool for the purpose. Work it backward and forward. Spare no labor and you will have a fine seed bed, for it is useless to expect fine seeds to come up if they are buried beneath great clods of dirt.

### PLANTING THE SEED.

In starting flower seeds of any kind, only heat and moisture are required until they sprout through the ground. Sow the seeds thinly, then cover with finely pulverized soil; as a general rule, cover only to twice the thickness of the seeds. Such fine seeds as Petunia, Portulaca, Ice Plant, Lobelia, &c., need only to be pressed into the soil with a piece of board or the palm of the hand. Always press the earth down firmly after sowing all flower seeds, else there is danger of their drying up before the roots get a firm hold of the soil. If the ground becomes very dry just as the seed is starting, it will not grow. Never under any circumstances allow the sun to dry them out. Along with the sun they must be kept moist. An hour of a bright, clear sun may so dry them that germination is destroyed. It is at this critical point really where the fault of so-called bad seeds largely lies. In the case of large seeds, there is less need of this precaution, but when once they are wet, keep them so or you will be likely to suffer loss.

### WATCH THE SEEDLINGS

As they come up, and do not let them become weak and spindling from overcrowding. Keep the weeds down and loosen the ground occasionally, to give air and sunshine to the hungry feeding roots.

### IF DROUTH THREATENS

Cover the surface of the bed with a two or three inch mulch of grass-clippings, litter, chip-manure, etc., to keep the roots cool and moist.

### TRANSPLANTING.

Nearly all flowers will bear transplanting. Sweet peas and poppies are usually sowed where they are to grow. By growing them in boxes, hot-beds or cold-frames and transplanting them, you escape the first growth of weeds.

### THE WINDOW GARDEN.

**Extent of Collection.**—It is bad policy, especially for beginners, to start the season with too large a collection. Begin with easily grown plants, and proceed to more fastidious ones by degrees. It is a mistake to crowd the space for plants unduly. Let each specimen stand nearly or quite clear from all others, even if it be at the cost of throwing out some plants. Half a dozen fine, vigorous, uncrowded plants are much more satisfactory than three times as many crowded, and, as a consequence, ill-shaped and unhealthy ones.

**Suitable Soil.**—There is, doubtless, too much stress laid upon the importance of suitable soil; and amateurs sometimes become discouraged at the thought of obtaining the certain kind of sand, the leaf mould, the loamy soil, or the clay, and all the other sorts so very necessary. The real truth of the matter is that any good fertile garden soil, that will grow plants outside, will be quite as good for window garden culture. The addition of a little sand or leaf mould, if it can be obtained, or of street sweepings for those who live in the city, or anything that will make the soil light and porous, is desirable for potting the young plants with tender roots.

**Cutting Back Plants.**—Plants grown in the house are best kept in good shape by pinching the end buds of those shoots that grow too vigorously. This is much better than allowing a few shoots to grow until they need support, and then cutting them back.

In taking up plants from the garden for house culture, it is best to cut back at least one half, and, after potting in good soil, water at once, and put in a cool, shaded place.



## CULTURAL DIRECTIONS.

**Abutilon.**—(Belle Flower.) Perennial. Sow in shallow boxes in a temperature of 60 degrees. Transplant into similar boxes or into small pots when the seedlings are fit to handle. Plant out in May, or for later flowers sow in the open ground in May. For winter or spring flowering sow in August or September.

**Abrus.**—(Crab's Eye Vine.) Thrives best in sandy loam. Seed requires bottom heat to germinate well and a strong heat to keep in a growing condition and to flower well.

**Acroclinium.**—Half Hardy Annual Everlasting.—Thrives best in a loamy soil and constitute very neat summer flowering annuals if sown out of doors in patches in June; they are also useful as winter decorative green house plants if seed is sown in August in pots placed in a cold frame. The flower heads should be gathered when young to preserve them.

**Ageratum.**—Hardy Annual.—Start the seed under glass and transplant two feet apart.

**Alyssum.**—Hardy Annual.—Most effective if planted in masses one foot apart, as early in the spring as possible, in the open ground.

**Amaranthus.**—Half Hardy Annual.—Seed may be sown in the open border or in a hot-bed, and transplanted about the last week in June to 20 inches apart.

**Ambrosia.**—Hardy annual.—One of the easiest plants to grow, seed may be sown early in the open ground.

**Anchusa Capensis.**—Hardy perennial.—If sown early, blooms the first season, growing freely in shady situations.

**Antirrhinum.**—(Snapdragon).—Tender Perennial.—No better plant could be chosen for house cultivation than the snap dragon, (Antirrhinum.) It has dark foliage and bright, oddly shaped flowers. There are six or eight distinct colors. Set in four or five inch pots, one plant in each pot, in any good garden soil, mixed with a little well-rotted stable manure they can hardly fail to give satisfaction. Give them all the sunlight possible, and water once each week with a little liquid manure. They may be propagated by slips, by layering or from seed.

**Arabis Alpina.**—Hardy perennial.—One of the easiest possible culture in any dry soil. Seed may be sown outside early in spring, or in pans or boxes when they can be transplanted to a shady border.

**Aster.**—Half Hardy Annual.—Sow in boxes, in the house, the last of April, or in open ground, in May; transplant to one foot apart, in deep rich soil.

**Aquilegia.**—(Columbines). Hardy Perennial. They prefer a moist and sheltered situation, with exposure to the sun and require a good friable sandy loam and leaf soil, with good drainage. Sow seeds thinly, in pans or cold frame, when up and strong enough to remove, the seedlings may be planted out when they are in bloom, allowing every plant at least nine inches each way.

**Balsam.**—(Lady Slipper). Tender Annual.—The soil in which they are sown should be of the richest possible character; the plants should be set 15 inches apart, securely staked, and receive frequent waterings of manure water. In order to have the finest double Balsams, plants must be transplanted from the seed-bed. If sown where plants are to bloom, they will be semi-double to a large extent.

**Balsam Apple.** (Momordica).—Annual Climber.—Well adapted for trellises, arbors, etc., in a warm situation outside, and in a rich, light soil. Plenty of water should be given during the growing period.

**Bachelor's Button.**—Hardy Annual. Sow in open ground, in May or first of June; transplant to six inches apart.

**Beans, Scarlet Runner.**—Tender Annual Climber. Do not plant until settled warm weather and the ground is in good condition, they require same treatment as common garden beans. In planting, be careful to place the eye of the bean DOWN.

**Begonia.**—(Tuberous Rooted Varieties.) These magnificent varieties have become exceedingly popular and can be grown from seed. They germinate well and it only requires a little care to grow the plants. Sow seed in February or March in pots on a surface of fine soil and cover with glass. Take great care not to wash out the young plants in watering; they will give an abundance of bloom the first year. At the end of the season the plants may be dried off by withholding water, the tubers gathered and kept in a dry place, free from frost, and planted the following spring, when they will bloom more freely than ever. Tubers are offered for sale by some, but they are very expensive, and a single packet of seed, if properly handled, will furnish what would cost many dollars.

**Begonia.**—(Fibrous Rooted.) From seed sown in February or March, and with generous treatment, plants may be flowered within six months. Sow again in July or August for spring and early summer flowering. A temperature of about 65 degrees is necessary, well drained pots, and a good mixture of soil. Prick off the seedlings while quite small, and shift on as the pots become filled with roots. As Begonia seed is slow and irregular in germinating, the sowing should be thin, so that seedlings can be lifted without disturbing the adjacent seed.

**Bellis.**—(Double Daisy.) Half Hardy Perennial. Sow in May and transplant eight inches apart.

**Bird of Paradise.**—(Poinciana Gillesi.) Ornamental Shrub.—Seed being large and hard, should be soaked for a few hours in lukewarm water before planting in box in house. Give gentle bottom heat if possible. A mixture of loam and leaf mould suits it best. Cuttings are somewhat difficult to root, but will succeed if taken off the mother plant in a growing state and planted in sand, with a hand glass placed over them in heat.

**Blue Daisy.**—(Agathaea Colestis.) Perennial. Allied to Cineraria and requiring the same treatment. Young cuttings root freely in a gentle heat, at all times; and the plant may be had in flower all the year round.

**CLEMATIS—Paniculata.**—Sow out of doors after danger from frost is over, in beds of finely pulverized soil, covering the seeds to a depth of not over four times their size; thin out as it becomes necessary. Transplant into permanent position as soon as the seedlings are large enough, so that they can become established before cold weather, or sow in the early fall, carrying the Plants over in cold-frames, and transplant to permanent position in spring.

**Calceolaria.**—SEEDS OF GREENHOUSE PLANTS, especially Calceolaria, require extra care in sowing, as the seeds are very fine and delicate. The pans must be well drained, say half filled with crocks, and on this a layer of rough fibrous peat or turf, and fill up with a compost of the following proportions: Two-thirds light, rich loam, one-third peat, silver sand and thoroughly decayed cow manure, the whole thoroughly well mixed together. Make the surface as smooth as possible and sprinkle a little silver sand over it; water with a fine hose; after the pans have thoroughly drained, the seed must be very evenly and thoroughly sown—

it will require no covering. After sowing place the pans under a glass in close frame (it will require no artificial heat), keep shaded, as exposure for a short time to the sun's rays is often enough to scorch the delicate leaves and rootlets of the seedlings. Directly the plants are large enough to handle they must be pricked into other pans which have been prepared in the same manner as for seed sowing, and allowed to grow until they touch each other, then shifted into small pots, and replaced in the close frame; as soon as the roots fill these pots it will be necessary to repot in larger sizes. They will now do, if replaced in frames or put on shelves in the greenhouse near the glass; water regularly, repot and shake when required. If troubled with green fly, select a quiet evening and fumigate with tobacco paper.

These remarks will apply also to the cultivation of the Cineraria, Chinese Primrose, Carnations, and many other rare seeds, except that they are more hardy and will thrive with less care. The seeds being larger will require a light covering of finely pulverized soil.

**Calendula.**—Hardy Annual. Sow in boxes early or in open ground in May or June; transplant to one foot apart.

**Calliopsis or Coreopsis.**—Hardy Annual. Sow where they are to remain, and thin to two feet apart.

**Campanula.**—(Canterbury Bells.) Hardy Biennial. Very attractive border plants; they succeed best in light, rich soil, and should be transplanted two feet apart.

**Canna.**—Tender Annual. Soak the seeds half an hour in hot water before sowing. Plant in a warm place the middle of April, or open ground only after it is quite warm, the first of June. Transplant to one foot apart in rich soil.

**Candytuft.**—Hardy Annual. Seeds should be sown where plants are to bloom in fall or early spring; any good soil is suitable; thin out to four or five inches apart.

**Canary Bird Flower.**—Tender Annual. (See Nasturtium for cultural directions.)

**Carnation.**—(See Calceolaria for cultural directions.)

**Celosia.**—(Cockscomb.) Half Hardy Annual. The seed should be started in a hot-bed, or in pots in a warm room, and transplanted to a warm, rich soil.

**Centrosema, Grandiflora.**—Hardy Perennial. Sow seed as early in the spring as practicable in open ground, soaking the seed in warm water over night before planting.

**Centaurea.**—(Dusty Miller.) Hardy Perennial. Seed should be sown in slight heat, and when the seedlings are large enough to handle, they should be potted off singly into small thumb pots, in which they may be kept through the winter in a cold or cool house, a shift being given in the spring.

**Chrysanthemum.**—Annual Varieties. Sow in good, light soil during last of April and May; thin out to one foot apart.

**Chrysanthemum.**—Hardy Perennial. Sow in boxes or cold frame in the spring, and make several transplantings, as the plants advance in growth.

**Cineraria.**—(See "Calceolaria" for cultural directions.)

**Cleome Pungens.**—(Giant Spider Plant.) Annual. Thrives best in light, rich soil, in a dry, warm situation, where they have plenty of room to spread.

**Clianthus Dampieri.**—(Perennial.) Sow seed singly in a good sized pot (5 inches in diameter is none too large) late in summer, the plants to remain until the following spring, when they should be potted over without disturbing the roots in any way, into the full size in which they are to flower. When planted outside, a hot, dry, sunny position under a south wall should be selected and the plants kept as dry as possible.

**Cobæa.**—Tender Perennial. Sow early, indoors, putting the seed edge down, and keep slightly moist until the young plants appear. Plant out after the ground has become settled and warm—about the first of June. The plants can be carefully potted before frost in the autumn, and will bloom in the house during winter.

**Coccinea.**—Half Hardy Perennial. A handsome climber of the Gourd species, flowering the first season, if started early in heat.

**Coleus.**—Tender Perennial. Plant in a warm situation indoors, in a temperature of 70 degrees, and bed out as soon as danger of frost is over. Slips should be taken from the finest and potted for winter.

**Cosmos Hybridus.**—Sow seed in gentle heat in April or May, and when large enough transplant to open ground similar to other annuals.

**Cosmos.**—Is one of the few flowers that does not easily succumb to frost, and in favored localities it was still in blossom on Nov. 28, being fully as hardy as the chrysanthemum. The only objection to its more general cultivation is that it does not come into flower until there is danger of its being killed by winter cold. This can be avoided by sowing the seed in March and growing the plants on in pots, not using larger than four-inch size. The plants should be kept in these until they set their buds, and the pots completely filled with roots; then transfer to the garden and they will bloom by August.

**Cyclamen.**—Greenhouse Perennial. If sown early in spring under glass, and well grown, will make flowering bulbs in one year.

**Cypress Vine.**—Tender Annual. Sow in the ground only after it is thoroughly warm, and soak the seed in lukewarm water two hours before sowing.

**Dahlia.**—Half Hardy Perennial. Sow the seeds in shallow pan or box in March, and transplant the seedlings, when large enough, to small pots. As soon as strong enough, plant out one foot apart.

**Datura.**—Half Hardy Annual. Start early and transplant to 20 inches apart. The roots may be packed in sand during the winter.

**Delphinium.**—See Larkspur.



# Grand Special Introduction Offers.



THE following exceptional offers are made to interest you with a view to introducing our peerless BULBS and PLANTS to culturists who want the very best selections producible. The one constant aim is to have the very best sorts that critica' culturists have accepted or proven to be the highest standard of excellence, thus knowing that our part will be faithfully anticipated, the future success depending on your careful efforts entirely. Then

## Betscher's Bulbs and Plants Grow and Bloom Beautifully.

### THE GLADIOLUS—Our Leading Specialty.

The Gladiolus is the most desirable, attractive and fashionable of all summer blooming bulbs or plants. No flower has such a wonderful multiplicity of color, brilliancy and delicacy of tints, rivaling the rarest of orchids or roses; always sure to bloom; has no insect enemies; can be used very advantageously in many ways. As a decorative cut flower it is exceptionally adaptable.

Our one constant aim is to produce the most critically selected strains in existence. We are constantly selecting the very essence of culture from all parts of the world, combining the very highest types of all this stock by breeding on strictly up-to-date methods, uniting such as have to a high degree the essential elements necessary to maintain the highest standard of excellence.

**CULTURE:** Plant every two weeks from time soil can be cultivated until July; will give a grand lot of bloom from June until cut down by frost. Plant 6 inches apart in rows, 4 inches deep. Plant largest bulbs last. After frost lift and cut off near the bulb. Keep in a cool, frost-proof place. Any good soil will do well for gladioli, but the better the soil and culture, the better the result.

### PEERLESS STRAIN GLADIOLI.

Especially selected from our extensive collection for those who desire the very best procurable, embracing every shade from purest white, blue, yellow, etc., etc., representing all types—Childsii, Gandavensis, Groffs, Lemoinei, etc., etc., etc.

	Per doz.	Per 100	Per 1000
First size.....	50c	\$3.50	\$25.00 by Exp.
Second size.....	35c	2.50	20.00

### MIXED GLADIOLI, to Color.

These are intended for those who desire principally solid colors for particular effect. By mail prepaid.

	Per doz.	Per 100
White and light mixture, extra.....	50c	\$3.00
White and light mixture, choice.....	30c	2.00
Yellow, fine yellow tints.....	40c	2.75
Red, rich red and scarlet.....	25c	2.00
Pink, rich, deep and light.....	30c	2.00
Variegated, choice.....	35c	2.00

### GLADIOLI LEMOINEI.

The rich and peculiarly odd markings of these gladioli, with their superb shape, rival the richness in markings of the orchid—embracing every shade of yellow, red, brown, blue, green, etc., so richly blended that they win the admiration of every lover of flowers.

Per doz., 25c; per 100, \$2.00; by express, \$15 per 1000.

### GLADIOLI—Blues.

A novelty worthy of a place in every collection, embracing many tints in blues, lilac heliotrope, sky blue, etc. Not exactly a fancy flower, but of all plants on our grounds, created most enthusiasm. Something uniquely novel. 25c each, \$2.50 per doz.

### 12 FINE GLADIOLI for \$1.00.

**African.** Color of the deepest crimson black.  
**Addison.** Dark amaranth, striped white.  
**Augusta.** The best white variety, nearly pure.  
**Bertha.** New orange, scarlet.  
**Ben Hur.** Fine, large red—Childsii sort.  
**Eugene Scribe.** Tender rose, suffused and striped carmine; very fine.  
**Grand Rouge.** A brilliant, flaming scarlet.  
**Isaac Buchanan.** The best clear yellow.  
**Mabel.** Rich, showy vermillion, magenta shade.  
**Octoroon.** Distinct, pleasing salmon-pink.  
**May.** Spike and blooms very large; white, suffused with carmine, with rosy flakes.  
**Snow White.** Grand, pure white, beautiful and showy; 20c each.

10c each; the 12 for \$1.00.

Remember everything in these offers is free by mail except where noted by express. Good sound bulbs and healthy, vigorous plants. Our stock is the very best testimony of its excellence.



### PREMIER STRAIN GLADIOLI.

One of the very best commercial mixtures in America, equal to any we have ever inspected or tested. No cheap rubbish, largely seedlings, carefully rogued. Fully 50 per cent light shades. Our most exacting customers pronounce it "very fine", "excellent", etc.

	Per doz.	Per 100	Per 1000
First size.....	30c	\$2.00	\$10.00 by Exp.
Second size.....	20c	1.20	7.50 by Exp.

### CRAWFORD'S STANDARD MIXTURE GLADIOLUS.

An exceptionally fine strain, representing the life work and selection of M. Crawford Co., one of the oldest and most exacting firms in America, whose entire stock of over 2,000,000 bulbs was purchased in November. Recognized for a generation as an exceptionally fine strain.

	Per doz.	Per 100	Per 1000
First size.....	30c	\$2.00	\$10.00 by Exp.
Second size.....	20c	1.20	7.50 by Exp.

### GLADIOLI CHILDSII.

These distinct new gladioli are worthy of trial by amateurs, as they are giants in growth, bloom, size of spikes, etc., embracing every color known to the family, grayish blues, etc., mottled, splashed, etc., and are quite difficult to describe, owing to their variability in shadings of unsurpassed beauty. A very large number of the Childsii types are shades of red.

Fine mixed Childsii, 10c each; 50c per doz.; \$3.00 per 100.

### GLADIOLI GROFFS—New Hybrids.

A new strain largely hybrids of Childsii, Nancieanus, etc., etc.; very vigorous growth, excellent large blooms, largely scarlet shaded. This strain contains very fine stock. Everyone should try them. At the Pan-Am. Exposition they created unusual attention and enthusiasm. Our stock is composed largely of fine selected stock.

	Per doz.	Per 100	Per 1000
First size.....	65c	\$3.50	\$20.00 by express
Second size.....	50c	\$2.75	\$15.00 by express
Third size.....	40c	\$2.00	\$12.00 by express

Please Mention Floral Culture.

Address all orders and letters in reply to above ad. to

**BETSCHER BROS., Canal Dover, O.**



**Dianthus.**—(Chinese Pinks.) Hardy Annual. Sow seed in May when the ground has become warm; thin or transplant when two inches high to four inches apart. It is truly astonishing how this useful class of plants is neglected, or not grown at all, which is better than to half grow a thing, when it possesses so many real points of usefulness. *Dianthus heddewigi*, with its numerous beautiful varieties, is one of our most valuable summer flowers, although it is unjust to call it a summer flower, when, with but little attention, it can be made to ornament the garden from June until November, or until such time as the frosts destroy the *chrysanthemum*.

**Digitalis.**—(Foxglove.) Hardy Perennial. Sow out of doors after danger from frost is over, in beds of finely pulverized soil, covering the seeds to a depth of not over four times their size with light soil. Press down firmly, thin out as it becomes necessary, transplant into permanent positions as soon as the seedlings are large enough so that they can become well rooted before cold weather. Or sow in early fall, carry the plants over in cold frames and transplant in the spring.

**Dolichos.**—(Hyacinth Bean.) Half Hardy Annual Climber. They are of easy culture. Plant out doors where they are to grow, in good soil about one inch deep, as early in spring as ground is in good condition.

**Eschscholtzia.**—(California Poppy.) Half Hardy Perennial. Sow where the plants are wanted to bloom, as they do not bear transplanting. Thin them to six inches apart.

**Feverfew.**—(Matricaria.) Half Hardy Perennial. Succeeds best in a light, rich soil.

**Forget-Me-Not.**—(Myosotis.) Hardy Perennial. Sow in finely prepared soil the first of June. Transplant to a shady situation. Keep well watered during dry weather.

**Fuchsia.**—Greenhouse Perennial. As easily grown from seed as from cuttings. Sow in shallow box; transplant into pots as soon as large enough. They require a rich soil to grow luxuriantly; a fuchsia is a nuisance if not thrifty. Well rooted turf, some leaf mold and a little sand is quite to their taste. Stick in some old, rusty nails; the oxide of iron deepens the color of foliage and flower. They are gross feeders and should have weak liquid manure once a week, when budding or in bloom. They do not need a high temperature, but plenty of light and air. Red spiders trouble them if the air of the room is too hot and dry; these can be routed by washing both sides of the leaves with soap-suds, afterward showering with soft, tepid water.

**Gaillardia.**—(Blanket Flower.) Hardy Annual. Sow early in boxes or frame and transplant to the garden in common soil the middle of May.

**Geranium.**—Half Hardy Perennial. Start in the house in a box filled with fine, rich soil, cover with a pane of glass and place in the dark and keep moist until the seeds germinate, then admit light and air. Transplant when large enough.

**Gloxinia.**—Tender Perennial. They grow best in a porous, well enriched soil, in a warm, moist atmosphere.

**Godetia.**—Hardy Annual. But a very few of the annual class of flowering plants which may be regarded as of quiet beauty, are more desirable than *Godetias*, and their attractiveness does not greatly decrease before late autumn. A main point in their culture is to keep them steadily growing, and to keep all the seed vessels picked off, together with having good soil, and in times of drought free watering at night during summer. The plants should stand not closer than five inches each way. Seed can be sown early out of doors, where they are to bloom, in finely prepared soil, the last of May or the first of June.

**Comprehens.**—(Globe Amaranth.) Half Hardy Annual. Sow in boxes in a warm place; soak the seed in warm water a few hours before sowing; transplant to one foot apart. The flowers should not be picked for drying until they are fully matured.

**Courd.**—(Ornamental Climber.) Tender Annual. Seed can be sown outside about the first of June, after the ground has become warm. The plants are tender and should be planted where they are to grow.

**Helianthus.**—(Sunflower.) Hardy Annual. Plant seed in the spring when desired, and thin to four feet apart.

**Helichrysum.**—Hardy Annual. Sow early in boxes in the house, or in the garden in May and June; transplant to eight inches apart in light, mellow soil.

**Heliotrope.**—Half Hardy Perennial. Sow in hot-bed in March; keep soil moist and give air bright days, but protect at night. Transplant in May, before a warm rain if possible, in light, rich soil.

The *Heliotrope*, which is prized for its delightful fragrance as well as for its flowers, seems to be but a disappointment to many, but if in *Good Companion* is a very free bloomer and satisfactory plant. It is not troubled with insects, which is one strong point, but this plant must be kept moist at the roots and out of the burning sun; for one day's or perhaps one hour's drought at the roots will produce the dry rot which attacks the leaves, causing them to turn black and fall off. Always give the *Heliotrope* a good-sized pot—it needs plenty of root room—and in transplanting to and from the garden the plant is strengthened and its beauty increased by very severe pruning; for the inclination of this plant is to grow, not bushy and strong, but with long, slender branches, almost vines—indeed I have seen lovely specimens blooming beautifully as house plants after doing service outdoors.

**Hibiscus.**—Sow in boxes, in the house covering the seeds barely sufficient to hide it from sight, and keep the surface moist by shading till the seed germinates; transplant about the first of June, to a rather moist soil.

**Hollyhock.**—Hardy Perennial. Start the seeds in boxes in house early. When plants have made three or four leaves, transplant to garden to one foot apart early in June and they will bloom the first season.

**Humulus Japonicus.**—(Japanese Hop.) Hardy Perennial. A climber of easy culture in ordinary garden soil, but thriving best in a deep loam.

**Ice Plant.**—Tender Annual. Succeeds best in dry, sandy soil and in a warm situation. Can be grown in hanging baskets, vases, pots or open border. Cover the seeds with a thin layer of soil.

**Impatiens Sultanii.**—Tender Perennial. I do not advise a start before March, and not then unless a steady heat of 60 or 65 degrees can be relied on. Sow in well-drained pots, filled with soil composed of two parts of tuffy loam and one part of leaf soil, with very little sand added. The seedlings are exceedingly brittle at the outset, and repotting should not be attempted until they are about an inch high. Even then they need

delicate handling, and after the task is accomplished they should be promptly placed in a warm frame or propagating pit for a few days.

**Lantana.**—Half Hardy Perennial. Suitable for pot culture. Start under glass in loamy soil and transplant.

**Larkspur.**—Hardy Annual. Sow early in open ground in the place where it is to bloom, as the plants are not easily transplanted. Thin out ten inches apart.

**Lathyrus.**—(Everlasting Pea.) Hardy Perennial. They are easy of culture, thriving in almost any moderately good garden soil. Sow seeds early in spring in an open border. The root of this plant being woody, it is essential that at the beginning it should be planted deeply, in order to prevent the frost from heaving it to the surface, when the crown becomes frozen and the plant dies. By observing this precaution the plant will be found to be perfectly hardy, and by removing the old blossoms, the length of the bloom ing period may be greatly prolonged.

**Linaria.**—(Kenilworth Ivy.) Hardy Perennial. Sow seed during March or April, on light soil, well drained.

**Linum.**—(Crimson Flax.) If the seed be sown in the hot-bed, and the plants transplanted into good, rich soil, one foot apart, the period of flowering will be much advanced, but the seed can be sown in open ground after it becomes warm.

**Lobelia.**—Half Hardy Annual. Sow in boxes in the house, covering the seed barely sufficient to hide from sight; and keep the surface moist by shading with paper until the seeds germinate. Transplant about the first of June in moist soil.

**Marigold.**—Half Hardy Annual. The seed should be started in a hot-bed and transplanted six inches apart in June, in common soil.

**Marvel of Peru.**—(Mirabilis.) Hardy Annual. Will grow in any common garden soil from seed sown in open ground. The plant is large and requires two feet of space. Sometimes called "Four O'clocks."

A Cheap Border of Flowers can be had by planting a few cents' worth of seeds of the good, old-fashioned Four O'clocks. Sow them two feet apart in a drill. They will make plants two feet high, and the row will be as compact as a hedge, and in early morning and evening as handsome a display as it is possible to make. In cloudy mornings the flowers will keep open until noon, rivaling in beauty a collection of the choicest azaleas. No two plants will be alike, and on the same plant there will be a great diversity of color.

**Mimulus.**—Half Hardy Annual. The seeds are very delicate and should be sown indoors in boxes; transplant after the ground has become well warmed; place in rich soil, about eight inches apart. It is perennial in the greenhouse.

**Maurandia.**—Half Hardy Perennial. Sow early indoors, and transplant to open air in June, and it will flower profusely the first season.

**Mignonette.**—Hardy Annual. May be sown in the open ground any time in the year when the ground is not frozen. It is perfectly hardy, and easy of culture, growing well in almost any situation.

**Mimosa Pudica.**—(Sensitive Plant.) Usually treated as an annual, but under stove treatment it assumes a perennial character. Seed may be sown during spring in a hot-bed, or by cuttings of rather firm, young shoots, inserted in sandy soil in heat. Thrives best in a compost of loam and peat in equal proportions, to which a small portion of sand may be added.

**Mina Lobata.**—Tender Annual. Sow seeds early in spring in a warm house. A good plan is to place two or three seeds each in small pots and afterwards transfer the plants bodily into larger sizes. A suitable compost consists of fibry loam, rotten manure, and leaf soil, which should be mixed together and used somewhat lumpy.

**Molucca.**—(Shell Flower.) Hardy Annual. Seed should be sown in a hot-bed during spring, and the seedlings transferred to the open border during May. A sandy loam is the most suitable soil.

**Morning Glory.**—Half Hardy Annual. The seeds germinate so easily that they can be grown in the garden anywhere the plants are needed. Supply support early, either cord, wire or brush.

**Nasturtium.**—Hardy Annual. Sow in boxes and transplant first of June to eight inch apart. They flower better in poor, rocky soil, as a rich soil has a tendency to make them "run to leaf." An ounce packet of *Nasturtium* seed will be sufficient for a bed twenty feet in diameter, and will make a better display, for three months, than almost any other plant. The flowers are ever bright and cheerful, the foliage a repose for the eye, while the bed will furnish a bountiful supply of delicious pickles. Combine the beautiful with the useful.

**Nicotiana.**—Half Hardy Annual. Seed should be sown in February or March in gentle heat, and the young plants pricked out, when large enough, and planted out early in June.

**Nigella.**—(Love-in-a-Mist.) Hardy Annual. Sow early in the flowering beds, or they may be transplanted, using care in shading the plants. *Nigella* is one of the loveliest annuals, and they are exceedingly useful in many kinds of florists' works. And in addition, the seed is deliciously fragrant, and as elegant for sachets as Rose petals or Orris root, and the fragrance seems not to waste or lessen as is the case with Rose petals, and for the sake of the sweet seeds, the plant is worthy.

**Noiana.**—Hardy Annual. Sow in open ground early, in light soil. Transplant to one foot apart.

**Oenothera.**—(Evening Primrose.) Hardy Annual. Thrives in almost any soil or situation.

**Ornamental Grasses.**—They are mostly annuals, and those which are not, flower the first year. They should be sown in April or May, in a good soil, and thinned out or transplanted, giving each plenty of room.

**Orange Daisy.**—(Erigeron Aurantiacus.) Perennial. Splendid



## CALLAS.

**Fragrance.** Fine novelty, richly perfumed, white, 25c.  
**Lemon Giant.** Rich delicate lemon, 75c.,  
**Little Gem.** Miniature growing, pure white, 15c.  
**Spotted.** Medium size, white, black center, 15c.  
**Yellow.** Beautiful yellow, blackish center, 35c.  
 One of each for \$1.25.

## CARNATIONS.

America's most popular cut flower. The ten best sorts in cultivation.  
**Armazindy.** Fine variegated.  
**Daybreak.** Beautiful delicate pink.  
**Eldorado.** Yellow, penciled carmine.  
**Ethel Crocker.** The very best pink.  
**G. H. Crane.** Large bright scarlet.  
**Lawson.** The famous pink.  
**Marquis.** Fine light pink.  
**Macco.** Intense maroon.  
**Triumph.** Grand, deep pink.  
**White Cloud.** Best white.  
 10c each; the set for 50c.

## GERANIUMS.

### The Most Popular Bedding Plants.

**SINGLE.**  
**Gettysburg.** Brilliant deep carmine lake; an exceptionally fine sort.  
**Gustave Moreau.** Superb, delicate, silvery lilac, white center; one of the best.  
**J. Sallier.** A new and beautiful sort, suffused and veined with carmine lake on white ground.  
**Mrs. J. M. Gaar.** The best single, snow white.  
**M. Ch. Mollin.** Beautiful, large, clear, bright salmon; white eye; the best single salmon extant. 15c.  
**Midsummer.** Large, single, soft salmon, shaded to white; a very fine fancy variety.  
**Mrs. E. G. Hill.** The finest single salmon, of immense size and delicate color.  
**Mad. Bruant.** New and distinctly novel, color white, veined carmine lake, evenly bordered solferino.  
**Sam Sloan.** Very velvety crimson, fine bedder.  
**Souvenir De Mirande.** Upper petals white with rosy pink border, lower ones salmon.

### DOUBLE.

**Beaute Poitvine.** Fine, beautiful salmon tint.  
**B. K. Bliss.** Carmine red, most brilliant.  
**Bruant.** Bright red, very large and free.  
**Golden Dawn.** The nearest approach to the yellow geranium ever sent out.  
**J. J. Harrison.** Enormous brilliant scarlet.  
**La Favorite.** The best and freest blooming of all the double whites.  
**Marvel.** Large, crimson scarlet, a rich, glowing color, one of the best bloomers.  
**M. A. Dabouche.** Fine dwarf pink.  
**Mad. Jean Viaud.** A fine new pink, exceptionally large. 15c.  
**M. Press.** One of the very best salmon geraniums, distinct richly zoned foliage.  
**M. Sandorf.** Rich salmon red.  
**Prof. Poirpault.** Large, brilliant violet, the upper petals distinctly marked orange.  
**S. A. Nutt.** The best glowing velvety crimson.  
**W. P. Simmons.** Compact habit, brilliant orange scarlet, of the largest size, free blooming.

### IVY GERANIUMS.

**Joan Of Arc.** Perfectly double, white as snow, literally cover the plant when in bloom. 15c.  
**Souv. Chas. Turner.** The finest of the Ivy leaved geraniums. Carmine rose color. 15c.

### FANCY LEAVED.

**Freak of Nature.** Pure white stems and center of leaf banded deep green; a gem. 15c.  
**Happy Thought.** Large, creamy yellow center, banded deep green. 15c.  
**Mrs. Parker.** Rich rosy pink, semi-double flowers. The best silver-edged sort. 20c.  
**Mrs. Pollock.** Green leaves, rich bronzy red, zone belted crimson, edged creamy yellow. 15c.  
**Rose Scented.** Delightful fragrance.  
 Unless noted, 10 cents each; 10 for 50c; 20 for \$1.00; the 31 sorts for \$1.75.

## CHRYSANTHEMUMS.

The very finest extant. The utmost care used in selecting them. A list in which every one is a gem.  
**A. T. Ewing.** Beautiful creamy white, heavily penciled carmine pink.  
**Autumn Glory.** Beautiful salmon pink.

**Casco.** Pure garnet color, very distinct.  
**Florence Pullman.** A grand white.  
**Geo. S. Kalb.** Our best early white.  
**George W. Childs.** Rich velvet crimson.  
**Golden Wedding.** Richest golden yellow.  
**Ivory.** The most popular of all whites.  
**Kioto.** Perfect ball of a waxy yellow.  
**Major Bonafion.** Incurved, clear yellow.  
**Mrs. E. G. Hill.** Incurved, rich, delicate pink.  
**Mrs. Higginbotham.** Pink hairy variety.  
**Mrs. Perrin.** Beautiful glistening pink.  
**Miss G. Pitcher.** This we consider our best cut flower variety of all yellows.  
**Miss G. Spaulding.** One of the best whites.  
**Mrs. Baer.** One of the finest yellows, late.  
**Oakland.** Clear shade of even terra cotta.  
**The Queen.** Very fine; pure white.  
**Wm. H. Lincoln.** A magnificent yellow.  
**Xeno.** Beautiful rose pink. One of the very best  
**Yanoma.** An excellent new snow white, late.  
 10c each; 10 for 50c; 20 for \$1.00.

## DAHLIAS.

Within the past two years interest has been revived in these beautiful flowers. We offer a small selection of the very best out of a collection of 600 sorts, embracing nearly all sorts in commerce. We have selected such sorts especially that are early and free bloomers.

### SHOW AND FANCY—TWELVE BEST VARIETIES.

**Arabella.** Pale primrose, tipped old rose.  
**A. D. Livoni.** Rich, clear pink, very fine.  
**James Vick.** Rich, deep purple maroon.  
**John Keynes.** Yellow tipped orange scarlet.  
**Mrs. Stancombe.** Straw suffused.  
**Pluton.** Rich, pure yellow.  
**Queen Victoria.** A rich yellow.  
**Storm King.** Pure white, perfect form.  
**Uncertainty.** Intense maroon tipped white.  
**White Bedder.** Large pure white.

### CACTUS—6 CHOICE SORTS.

**C. W. Bruton.** The finest canary yellow.  
**G. D. Alexis.** White tinted rose, very fine.  
**Nymphæ.** Distinct shrimp pink, edged deeper.  
**Oriental.** Rich terra cotta red, fine, large.  
**Wm. Agnew.** The best, rich glowing crimson.  
**Zulu.** Rich, intense maroon.

### POMPONE—10 SUPERB SORTS.

**Crimson Beauty.** Rich, glowing crimson.  
**Elegantea.** Soft pink, tipped deeper pink.  
**Guiding star.** Beautiful fringed white.  
**Gem of Lilliputs.** Deep maroon purple.  
**Kleina Dometia.** Variable orange-buff.  
**Miss Lou Kramer.** Yellow-tipped scarlet.  
**Prince Charming.** White penciled suffused, and tipped purple pink.  
**Snow Clad.** A dainty pure white. Very free.  
**Spring.** Rich buff-yellow, shaded and tipped pink and purple.  
**Vivid.** Rich crimson scarlet. Very free.  
 15c each; \$1.25 per doz. The 28 sorts of Dahlias for \$2.50.

### ABRIDGED LIST OF BULBS.

**Amaryllis, Equestre**—Salmon, scarlet, 25c each.  
**Amaryllis, Formossima**—Crimson. 10c each.  
**Amaryllis, Johnsoni**—Red, white stripes, 30c each.  
**Caladium, Esculentum**—35c, 25c, and 15c each.  
**Cinnamon Vines**—5c each; 50c per doz.  
**Dielytra, Spectabilis**—15c each.  
**Gloxinias**—15c each; 3 for 40c; \$1.50 per doz.  
**Hyacinthus, Candicans**—10c each; 50c per doz.  
**Iris, German**—10c each; 50c per doz.  
**Iris, Kamferi**—15c each; \$1.50 per doz.  
**Isemene, Calathina**—25c each; \$2.00 per doz.  
**Lilies, Album, Auratum, Roseum, Rubrum**—15c each; \$1.50 per doz.  
**Maderia Vines**—5c each; 50c per doz.  
**Montbretia**—5c each; 25c per doz.  
**Oxalis, Named Sorts**—10c per doz.; 35c per hundred.  
**Tigridas**—Very fine, 5c each; 50c per doz.  
**Tuberoses, Excelsior Pearl**—5c each; 35c per doz.  
**Tuberoses, Excelsior Pearl**—Largest 10c each; 50c doz.  
**Tuberoses, Albino**—10c each; 75c per doz.  
**Tuberoses, Variegated**—10c each; 75c per doz.  
**Zephyranthus, Candida, Rosea**—5c each; 30c doz.  
**Pæonies, Red, White, rose**—15c each.

Please Mention Floral Culture.



**Oxalis.**—Half Hardy Perennial. Very pretty herbaceous plants, with rich, rose colored blossoms. They thrive well in a mixture of loam and sand. Desirable for greenhouse decoration, rock work, or baskets out of doors.

**Pansy.**—Hardy Biennial. Seed may be sown in open ground in spring or summer, or in hot-bed early in spring. Young plants produce the largest and best flowers. The plants should always occupy a cool, partially shaded situation, and the ground cannot be too rich; coolness and moisture are necessary. Transplant when an inch high. Seed sown in July will blossom late in autumn; if sown in October, the following spring. The Pansy is a popular flower with both florists and amateurs, giving an abundance of bloom until after severe frosts, enduring our hard winters with safety, and greeting us in the earliest spring with a profusion of bright blossoms. It will flower better in middle of summer, if planted where it is somewhat shaded from the hot sun, and especially if furnished with a good supply of water.

**Petunia.**—Tender Perennial. Petunias will do well sown in open border in the spring, or earlier in cold frame or hot-bed and transplanted 18 inches apart. By the latter process they will come into bloom much earlier, although they will do perfectly well sown in open ground. Be careful not to cover the small seeds too deeply; they like a sandy loam. Double Petunias, as a rule, are shapeless monstrosities. If grown in the open border, the stems are not stout enough to hold them up, especially when heavy with rain, and they become dragged and soiled with earth, and very unsightly objects they are. Double Petunias are only satisfactory when grown in pots, and there are so many better things for pot culture, that it seems a waste of time to devote it to these. It is different, however, with the better single varieties, especially those of *Petunia Grandiflora*.

**Phlox Drummondii.**—Hardy Annual. The seed can be planted in open ground in autumn, or in spring in open ground, or plants may be started in the hot-bed in spring and transplanted. Set plants in good, rich soil six inches apart each way.

**Poppy.**—Hardy Annual. The seeds should be sown where the plants are required, in spring, and thinned out so the plants will stand one foot apart. Just as soon as the ground is mellow, prepare a patch by forking, then raking level; then sow the seed broadcast, rake it in lightly, and firm the soil on the surface with the roller or back of the spade. The seedlings will soon appear. Keep them weeded clean. They will bloom about the first of July. Let them ripen some seed and self-sow themselves, and you will ever afterward have Poppies.

**Portulaca.**—Tender Annual. Plant in open ground after it has become warm, in light, sandy soil, and in dry situation. After the plants appear, withhold water, and if the bed has a full exposure to the sun, the ground will be covered with plants, and the effect will be beautiful.

**Primula.**—(Chinese Primrose.) Tender Perennial. The seed can be sown any time from February to July, and soil prepared as follows: Take some leaf mold, about twice as much loam, and enough sand to make the whole light and porous. Mix all and pass through a fine sieve; fill a small, shallow box to within an inch of the top, and press down evenly. Then after watering the earth thoroughly, the seed may be sown on the surface with the lightest possible covering of soil, and kept constantly moist. It is best to place a piece of coarse brown wrapping paper on the soil to exclude light. If a fine rose watering pot is not available, water as needed may be gently poured on the paper, which should be lifted at night to give air, and entirely removed as soon as signs of the plants appear. When the plants are large enough to handle, they may be transplanted to another box, and when still larger put into

the pots in which they are to bloom, as they are sure to do the first winter. After blooming, the plants throw out sets, which may be taken off and treated the same as other cuttings. Those that have bloomed in doors should be set out in a shady place in the summer, and if flower buds appear, pinch them off. Never allow the sun on the seed pan or the plants.

**Ricinus.**—Half Hardy Annual. Soak the seeds in lukewarm water until they commence to split open, before planting. Put in a warm, sunny situation, and water frequently with liquid manure after the plants have attained strong growth.

**Rose, Dwarf Polyantha.**—Very hardy, and may be treated as annuals. Seed started in the house in February will give plants large enough to plant in the open ground in June where they will continue to bloom throughout the season.

**Rhodochiton.**—Half Hardy Perennial. See *Maurandia* for culture.

**Salvia.**—Tender Annual. Start the plants in a hot-bed and transplant into light, rich soil, about one foot apart.

**Salpiglossis.**—Half Hardy Annual. Start early in hot-bed, and transplant to light, warm, rich soil.

**Scabiosa.**—(Mourning Bride.) Hardy Annual. Plant the seed in hot-bed, and transplant to  $\frac{1}{2}$  feet apart.

**Schizanthus.**—(Butterfly Flower.) Sow in finely prepared seed-bed, or in boxes, in May; transplant to one foot apart in common soil. For indoor culture, sow at any time.

**Senecio.**—Half Hardy Annual. Succeeds in almost any loamy soil. Plant outside as early as the season will permit.

**Smilax.**—Tender Perennial. Soak the seed in warm water twelve hours and plant in pots, in hot-bed or greenhouse, in February, and keep in warm, moist place. One plant in a two-inch pot is enough. After they have completed their growth, and the foliage begins to turn yellow, turn the pots on their sides and withhold water till August, when the little bulb which has formed can be re-planted in good, rich earth, watered freely, and it will grow all winter.

**Solanum.**—(Jerusalem Cherry.) Half Hardy Annual. Easily raised from seed; succeeds in almost any rich, loamy soil.

**Statice.**—Hardy Annual. Sow seed early in spring, in a frame, the young plants being put out into their permanent places when large enough. They thrive best in sandy soil, in the open border or on rock-work.

**Stocks.**—(Ten Weeks.) Hardy Annual. Sow in boxes, indoors, in April, and transplant the last of May, in deep, rich soil, about one foot apart.

**Sweet Peas.**—Hardy Annual. Plant outdoors just as soon as the ground can be worked, five inches deep, in a double row, about ten inches apart, and the seeds dropped  $\frac{1}{4}$  inches apart, in the furrows; and fertilize with wood ashes, bone-flour or nitrate of soda. Supply brush or strings at least seven feet high, and water freely. Pick the blossoms every day and keep the pods off.

**Sweet Rocket.**—Hardy Perennial. Border plant; sweet scented in the evening. They thrive best in a somewhat moist, sandy loam.

**Sweet William.**—Hardy Perennial. Sow in prepared beds, in the garden, anywhere up to the middle of June. Transplant into good soil, eight inches apart. Cover lightly during the winter with leaves.

**Thunbergia.**—Half Hardy Annual. The seeds start slowly and should be sown in a hot-bed, or in a box in house, giving plenty of moisture and heat.

**Verbena.**—Tender Perennial. As early in the spring as sunshine and lengthening days warrant, sow the seeds in good garden soil, in a shallow box, cover to about their own depth, press the soil firmly about them and place in a sunny window. Do not allow the dirt to become too dry or too cold. Have patience; sometimes it takes a fortnight for the seeds to germinate, or even longer. When the seeds begin to appear above ground, be especially careful not to give too much water. When the third and fourth leaves appear, transplant into other boxes. If there is danger of insects, heat the earth in the oven before transplanting, and set the seedlings into it when it cools off so as to be about blood warm. It is well to start the seeds early enough to have plants three or four inches tall when the time comes for placing in the flower bed the last of May. Set the plants about eighteen inches apart, having previously made the ground rich and mellow. As fast as the branches appear, pin them down, firmly pressing the earth about them. The more the plants cross and re-cross each other, the better. Let very few blossoms go to seed; keep the weeds out, and the bed ought to thrive.

**Vinca.**—(Perriwinkle.) Tender Annual or Perennial. May be grown in the garden by setting out strong plants in a warm situation.

**Violet.**—Hardy Perennial. See Pansy for culture.

**Wallflower.**—Tender Perennial. Sow the seed early, and they will bloom the first year. While the plants are small, prick them out into pots.

**Zinnia.**—Hardy Annual. Succeeds well in any soil. Few plants equal the Double Zinnias for making effective beds of bloom. The seeds should be sown in March or April, and the seedlings transplanted once before removing to the open ground, which should not be done until danger of frost is past. Plant out temporarily at about six inches apart, and as the first flowers appear select the finest double specimens, lifting with a ball of earth attached to the roots, remove them to where they are to flower, setting at eighteen inches apart each way.

### A CHEAP, SHOWY FLOWER.

Zinnias are the most showy, the cheapest, the most enduring and desirable annual for large masses in beds; try them.

### LOBELIA FOR DECORATIVE PURPOSES.

This popular and beautiful flowering plant will be found most desirable for decorative purposes, such as vases, hanging baskets, rockeries, borders for beds, etc., blooming profusely from June to November. It is of easy culture and if seed is sown early, they will be big enough for vases or baskets in May or June.

### CENTAUREA MARGUERITE.

In watering plants, be very careful never to permit water to touch leaves or blossoms, only wetting the roots, and then very moderately.

### RED SPIDER ON PANSY.

In shady, dry places Pansies often become rusty and covered by a fine web. This is the work of the red spider. The best remedy is to cut off and burn the branches, and let the stems start new branches from the base. Keep these syringed or well sprinkled with soap suds to prevent another attack of the pest.

### PESTS IN THE SOIL.

To destroy pests which harbor in the soil of the garden, spade up the ground in the autumn and mix it well with wood ashes, this is particularly good for Asters, which suffer most from insects at the roots. Asters as well as Sweet Peas are much benefitted by using the soap suds from the weekly wash on them. It helps destroy the insects, and also to fertilize the ground.

## TABLE

Showing Quantity of Lawn Grass Seed  
Required for a Certain Number  
of Feet.

For 1 acre, 43,560 square feet.....	4 bu. or 80 lbs.
For $\frac{1}{2}$ acre, 21,780 square feet.....	2 bu. or 40 lbs.
For $\frac{1}{4}$ acre, 10,890 square feet.....	1 bu. or 20 lbs.
For $\frac{1}{8}$ acre, 14,520 square feet.....	$1\frac{1}{2}$ bu. or 27 lbs.
For $\frac{1}{16}$ acre, 7,260 square feet.....	14 lbs.
For $\frac{1}{32}$ acre, 5,445 square feet.....	10 lbs.
For 1-12 acre, 3,630 square feet.....	7 lbs.
For 1-16 acre, 2,723 square feet.....	5 lbs.
For 1-32 acre, 1,362 square feet.....	$2\frac{1}{2}$ lbs.



## ROSES.

The rose is the most popular of flowers. Constantly new kinds are appearing, but few survive more than a season. We have selected a list of the very best roses in cultivation, every one a gem.

## TEAS AND EVERBLOOMERS.

**Admiral Dewey.** A delicate shade of pink, highly recommended.

**Beaute Inconstante.** A wonderful rose, ranging in color from yellow to crimson.

**Bon Silene.** One of the grandest roses in cultivation. Color deep rose.

**Bridesmaid.** The most popular rose for cut flowers at the present time; of a rich shade of pink.

**Burbank.** Deep rose pink. A new rose from California; very promising.

**Catherine Mermet.** Bright pink center, shading into light creamy pink.

**Dinsmore.** Flowers large, dazzling, scarlet-crimson. Spicy fragrance of the Hybrids. 20 cents each.

**Etoile de Lion.** A magnificent, rich golden yellow rose; a strong grower.

**Golden Gate.** Creamy white, delicately tinged with golden yellow and rose. Very fine.

**Helen Gould.** A new red rose that is creating a furore as the best forcing rose for cut flowers. Exceptionally fine.

**Hermosa.** Absolutely hardy, continuous bloomer. Of a bright, fresh, shell pink.

**J. B. Varrone.** Bright carmine, opening out into a fine double flower of varying shades of red and rose.

**Marie Guillot.** (Snow White.) The equal of any rose of its color in cultivation.

**Madame de Watteville.** Creamy yellow, each petal is distinctly bordered with crimson.

**Mlle. Franceska Kreuger.** One of the very best. The color is of a deep coppery yellow.

**Maman Cochet.** Deep rose without, beautiful silvery rose within, shaded golden yellow.

**Marion Dingee.** Color deep crimson, changing to carmine. Bright and pretty.

**Mad. Jos. Schwartz.** Produces bloom in great profusion; color, white, beautifully flushed pink.

**Mrs. De Graw.** An ideal bedding rose, rich pink; fine hardy everbloomer.

**Papa Gontier.** Color rich cherry red to clear glowing crimson.

**Perle Des Jardins.** The richest shade of golden yellow, full to the center. Very fragrant.

**Princess Bonnie.** Brilliant crimson; fine new sort of great promise.

**Princess Sagan.** The color is brilliant velvety crimson.

**Queen's Scarlet.** The very best of red tea roses for bedding. A fiery scarlet.

**Rainbow.** Pink, distinctly striped and mottled with bright crimson, shaded rich amber yellow.

**Souvenir du President Carnot.** A rosy flesh, shading to white at the edge of the petals.

**Safrano.** Bright apricot yellow, changing to orange and fawn, frequently tinted with rose.

**Snowflake.** A pure white Tea Rose that is remarkable for its blooming qualities. A good pot rose.

**Souvenir de Malmaison.** Large, double flowers; bright, fresh pink.

**Sunset.** A deep copper yellow.

**The Bride.** The most popular. Pure white.

**Viscountess Folkstone.** An enormous rose of delicate flesh white, shining like satin.

**White Maman Cochet.** An exceptionally fine new sprout, very fine for bedding. Pure white.

10c each; 10 for 50c; 20 for \$1.00.

## 3 GRAND POLYANTHA ROSES.

Three of the finest blooming roses, none more satisfactory for bedding purposes.

**Clothilde Soupert.** The color is charming, varying from almost snow white to deep rich pink.

**Yellow Soupert.** Rich chrome yellow with white edge beautifully blended.

**Pink Soupert.** A deep rich pink, of vigorous, free blooming habit. A grand rose.

10c each; 10 for 50c; 20 for \$1.00.

## HYBRID TEAS.

These Hybrids between the Teas and Hardy roses are among the most beautiful of roses, possessing the fine form of the Teas to a great extent, and the fragrance and hardiness of the other parents. Of all, the most popular (and deservedly so) are **LA FRANCE ROSES**. The most perfect form, the petals recurving gracefully, immense size, the fragrance rich, delicious, with us the best of all roses.

**Belle Siebrecht.** Beautiful form, solid pink; of free growth.

**Caroline Testout.** A satiny rose, edged with a clear fresh silver rose tint.

**La France.** Rich silvery rose, shading to pink within. Blooms continually. The finest of all roses.

**Mad. Schwaller.** Exceedingly rich in perfume, of a bright rosy flesh, very pure and clear.

**Meteor.** A velvety red rose, as fine as a hybrid.

**Pierre Guillot.** A bright dazzling crimson.

**Red La France.** A deep, rich pink, almost a real red, very bright and strong.

**Souvenir De Wootten.** Brilliant red, one of the most prolific bloomers in existence.

**White La France.** The delicacy of coloring of this superb sort is simply indescribable. A pure, pearly white within, with a satin sheen over its petals.

10c each; 20 for \$1.00; the set for 50c.

## HARDY HYBRID PERPETUAL ROSES.

This section contains the largest and finest of all roses, perfectly hardy. You are sure of roses every year.

**American Beauty.** The most popular rose grown. Deep rosy crimson color, immense size. 15c.

**Anna De Diesbach.** Clear rose, very fine color, very large, with a showy, deep cut form.

**Coquette Des Blancches.** One of the finest whites. Fine for cemetery.

**Clio.** Perfection in form, fine broad petals, beautiful at all stages of development; color delicate satin blush, with a light shading of rosy pink at the center. 20c.

**Earl of Dufferin.** Fine velvety deep crimson, with maroon shading.

**General Jacqueminot.** A rich velvety crimson.

**Giant of Battles.** A deep velvety blood red.

**Marshall P. Wilder.** Cherry carmine; a very rich sort.

**Margaret Dickson.** A new white hybrid of exceptional merit.

**Time Planter.** An old standby; hardy, having few equals where a hardy white rose is needed.

**Magna Charta.** A bright clear pink flushed with crimson. Extra large.

**Mrs. J. H. Laing.** One of the finest roses of its class. Color a soft delicate tint with satin tinge.

**Prince C. D. Rohan.** Intense maroon, shaded crimson scarlet.

**Paul Neyron.** One of the largest of all roses; of a deep shining rose color.

**Ulrich Brunner.** A large, finely cupped rose, of bright cherry red and very fragrant.

10c each; 75c per doz.; strong dormant plants, 35c each; \$3.50 per doz.

## CLIMBING ROSES.

**Climbing Meteor.** The acme of red climbers; rich velvety crimson, very fine.

**Empress of China.** A beautiful red, fades into light pink.

**Mary Washington.** A great bloomer; a dainty pure white.

**Marchal Neil.** The finest of all yellow roses.

**Rambler, Crimson.** Beautiful crimson.

**Rambler, Pink.** Pure, rosy pink.

**Rambler, White.** Pure white.

**Rambler, Yellow.** Creamy yellow.

**Randa's Triumph.** Pure white.

**Pink Roamer.** Rich pink, white center, single.

**S. O. Perfection.** Soft blush pink.

**Universal Favorite.** Beautiful rose.

10c each; \$1.00 per dozen; large plants, 35c each.

**Abutilon Ageratum, Cyperus, Feverfew, Fuchsia, German and Kenilworth Ivy, Heliotrope, Petunia, Primula and Vinca.** A fine stock of all the very best varieties, 10c each; 75c per doz.

**Coleus, Pansies and Verbenas,** very choice. 10c each; 50c per doz.

Please Mention Floral Culture.



## CANNAS.

The Cream of all productions. Every one of exceptional merit.

### FIVE LATEST NOVELTIES IN AMERICAN CANNAS. EXCEPTIONALLY PROMISING.

**Abraham Lincoln.** Tall growing, very promising, exceptionally large flowers and large trusses of a solid fiery crimson, early and profuse. 25c.

**Black Prince.** The darkest crimson ever sent out. Grand, large flowers freely produced in large, bold trusses. 25c.

**George Washington.** The richest shade of velvety crimson, large size, unusually fine. 25c.

**Luray.** Large beautiful trusses of bright, shining rose. The best of all pink sorts. 25c.

**Mt. Aetna.** Foliage dark purple, flowers of beautiful brilliant crimson, the best of its class. 25c.

The set of five sorts for 75c.

### FIVE SUPERB ORCHID FLOWERED.—Enormous.

**Allemania.** Flowers salmon-red with broad border of golden yellow, lower petal is dark salmon with yellow in center. 15c.

**Austria.** Rich canary yellow, slightly tinted with reddish dots. 10c. 50c per doz.

**Burbank.** Canary yellow, grand form and attractive green foliage. 15c.

**Italia.** Bright orange-scarlet, with broad golden yellow bordered blossoms of immense size. 15c.

**Wilhelm Beck.** Immense trusses of sulphur yellow flowers with red pencillings. 15c.

The set of Orchid Cannas for 50c.

### GIANT FLOWERING FRENCH CANNAS.

**Admiral Avellan.** A grand, vigorous, red-leaved sort, flowers, rich apricot-salmon.

**Alphonse Bouvier.** Always in bloom, immense clusters of brilliant velvety deep crimson.

**Alsace.** Clear creamy white, changing to nearly pure white, medium size, a continuous bloomer.

**Beaute Poitvine.** Bright crimson, one of the best dwarf bedding cannas.

**C. Henderson.** Rich, glowing crimson, a grand and very popular variety. 50c per doz.

**Duke of Marlboro.** Dark velvety crimson maroon. Beautiful.

**Defender.** Golden yellow, splashed crimson.

**Eldorado.** Rich, golden yellow, faintly dotted red.

**Egandale.** Bronzy green foliage, large spikes of rich cherry red flowers, freely produced.

**Florence Vaughan.** The best yellow spotted variety. Bright golden yellow, spotted red.

**Gloriosa.** Enormous trusses of a rich scarlet crimson, margined with a broad yellow band.

**L. Vaughan.** The brightest red leaved sort. A vigorous grower, large spikes of bright, crimson flowers.

**L. E. Bailey.** Similar to Florence Vaughan, a lighter shade of yellow, dotting not so distinct.

**M. Crozy.** The most popular canna, color bright scarlet bordered yellow.

**M. Berat.** The nearest approach to a pure pink. A rosy carmine, pleasing and effective.

**Pres. McKinley.** A brilliant crimson, shaded bright scarlet, superior to many crimson sorts.

**Philadelphia.** While not a vigorous grower, it is the brightest crimson of all.

**P. Marquant.** A grand sort, color bright salmon, tinted carmine.

**Queen Charlotte.** A rich scarlet-crimson, broadly bordered with bright yellow.

**Rose Mawr.** A beautiful bright rosy pink.

**Sec'y Chabanne.** A superior salmon.

**Souv. De A. Crozy.** The best of the gilt edge type; rich, dazzling crimson with bright golden yellow band.

**Tarrytown.** Bright, cherry red, dwarf but vigorous. 15 cents each, \$1.25 per dozen; dormant, 10 cents ea. h, \$1.00 per dozen.

### GRAND MIXED SELECT SEEDLING CANNAS.

Selected from thousands of seedlings, nearly all are equal to the choicest named kinds listed at much higher prices. At these prices everyone should plant them liberally.

4 for 15 cents; 35 cents per doz.; \$1.25 for 50; \$2.00 per 100.

**Palms and Ferns.** 1 of each for 50c. 1 Asparagus Sprenger, 1 Asparagus Plumosus, 1 Latania Palm, 1 Kentia Palm, 1 Boston Fern.

## BEGONIAS.

**Argentea Cuttata.** Purple bronze leaves, with bright spots of silver thickly covering them.

**Alba Picta.** Dwarf habit, small, rich, glossy green leaves, richly spotted, silvery white.

**Bruanti.** Bright, glossy green leaves, pure white flowers. Always in bloom.

**Compta.** Large pointed leaves, silver on satiny green.

**Diadema.** Rich olive green, deeply cut leaves, spotted silver.

**Duchartrei.** Lanceolate foliage, bronze green; reverse, reddish purple, elegant blossoms.

**Haageana.** One of the best grown; rich bronze green, reverse, red; a novelty of unusual merit. 25c.

**M. De Lesseps.** Leaf spotted like Argentea Cuttata, but about twice as large. White flowers.

**Metallica.** Glossy leaves, shaded with olive and crimson, with a metallic lustre.

**Pres. Carnot.** Very large long leaves that shine like satin, covered with silver spots. The flowers, immense glowing crimson, if grown warm.

**Rubra.** The greatest favorite of all. Great clusters of bright coral red flowers. Foliage, a deep green.

**Rosea.** A superb, strong, upright grower, with thick stems and many clusters of flowers. Rose colored.

**Sandersoni.** The "Coral Begonia." One of the best bloomers. The flowers, a scarlet crimson color.

**Thurstoni.** Unusually beautiful leaves, the smooth shining surface of Sauguinea and the deep veinings of Metallica. Flowers, a clear pink.

**Vernon.** A begonia that stands the sun like a geranium; a grand bedder, especially for edging beds.

**Weltoniensis.** Graceful, delicate, small satiny leaves, with small, pure rose flowers.

Unless noted, 10c each; 20 for \$1.00; 10 for 50c.

### REX BEGONIAS.

The "King" of Begonias. Grand foliage plants and easily grown, the marking of the large leaves being in rich shades of green, olive, silver and many other tints. The best new sorts, unnamed, eight for \$1.00; each, 15c.

### TUBEROUS BEGONIAS.

A charming class of summer blooming bulbous plants. Everyone should try them.

Single, all colors, 8c each; 3 for 15c; 50c per doz.

Double, all colors, 15c each; 3 for 30c; \$1.00 per doz.

## Special Plant Offers

### All Labeled.

### Customers' Selection as far as Possible

10 Extra Fine BEGONIAS.....	\$ .50
10 " " CANNAS.....	1.00
10 " " CARNATIONS.....	.50
10 " " CHRYSANTHEMUMS..	.50
10 " " DAHLIAS.....	1.00
10 " " FUCHSIAS.....	.50
10 " " GERANIUMS.....	.50
10 " " PANSIES.....	.50
10 " " PETUNIAS.....	.50
10 " " ROSES.....	.50
15 " " VERBENAS.....	.50
10 " " VASE PLANTS.....	.50

### Special Offer for 15c.

With 6 names of flower culturists who buy or grow the best bulbs, plants or seeds we will send you 12 very choice Gladioli, or 4 fine mixed Cannas, or 2 fine named Cannas, or 4 Zephyranthus, or 1 Gold Band Lily, or 3 Tuberous Begonias, or 4 choice Tigridias, or 5 new Montbretias, or 4 Tuberoses, or 4 Maderia Vines or 1 Spotted Calla, or 2 fine named Dahlias, or 18 Oxalis, or 12 choice Strawberry Plants. The 14 offers for \$1.75.

We aim to send out every order promptly.

Our Select List of bulbs and plants, also September List of Tulips and other bulbs, Strawberry Plants, etc., for fall planting are free. Send for them.

Please remit by P. O. or Express Money Order, N. Y. Draft; small sums in 1c stamps.

All offers in this list except noted, are free by mail,

Please mention Floral Culture.

Address all orders and letters in reply to above ad. to **BETSCHER BROS., Canal Dover, Ohio.**



### THIRD ANNUAL DISTRIBUTION

....OF....

## Farm Journal Coupons

Thousands of Miss Lippincott's customers have been delighted with the *Farm Journal*, which they have been enabled to get at a reduced rate by using a subscription coupon similar to the one enclosed in this booklet. It is an opportunity not to be missed. \* \* \* *Farm Journal* is the leading agricultural paper of the United States, with subscribers in every state and territory. \* \* \* \*

Find the Coupon and get it off at once, to

### Wilmer Atkinson Company,

Publishers....

### FARM JOURNAL,

Philadelphia, Pa.

## WALKER'S EXCELSIOR PLANT FOOD.



### Makes Flowers Flourish.

Flowers are like people. Their health depends upon their food. It must be *nourishing*, but not too rich to force growth and cause reaction. The one chemically correct flower food for house plants is

### Walker's Excelsior Brand.

It has no odor whatever, and can be used dry or dissolved in water for sprinkling. Use it and your flowers will flourish and their health will last.

Small size (feeds 25 plants 6 months), 25c.; large size (enough for a year), 50c. Sent prepaid anywhere. With each package we send FREE the book, "How to Make the Window Garden a Success."

Comes as a boon. Its use is so simple, the good results so positive, and the price so low, that there is no reason why any flower lover should be without a box of this valuable article. It is an odorless preparation, combining in a highly concentrated and soluble form every element required in plants to produce vigorous, healthy growth, and profusion of flowers.

It produces a prompt effect. It brings about a healthy development, and is permanent in its results, because it is a real food, not simply a stimulant, as so many so-called "fertilizers" are, whose use is followed by a reaction, which leaves the plant in a deplorable condition. Use this Odorless Plant Food according to the directions which accompany it, and you cannot fail to grow fine plants.

## WALKER'S JAPANESE FLOWER FOOD

Has no equal for improving Palms, Rubber Plants and Ferns, producing growth and renewing the green. By mail, 40c. Walker's Lawn Dressing, 50-lb. boxes, 50c.; 25 lb. sacks, \$1.25, by express, at purchaser's expense.

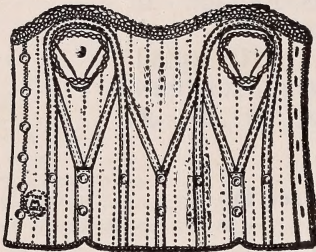
Address Orders for Plant Food to

### MISS C. H. LIPPINCOTT,

MINNEAPOLIS, MINN.



**STARK TREES** Have a 77-YR. RECORD, built upon the strong foundation of quality. The stock we offer for fall 1901 and spring 1902 surpasses in quality the product of all previous years. **We PAY FREIGHT**, box and pack free, guarantee safe arrival, guarantee **entire satisfaction**. STARK FRUIT BOOK free upon request. **We PAY CASH** each WEEK and want more salesmen. Outfit sent FREE. **STARK BROS.** LOUISIANA, MO. Huntsville, Ala. Dansville, N. Y., etc.



The "M" Waist.

The "M" taping carries the weight of trousers or skirt from the shoulders, preserving the proper poise of the infant figure, and allowing the **greatest freedom** to active children. No weight on armholes or neck; no sagging, no getting out of shape.

The fabric is the **firmest cotton**; buttons **stay on** and buttonholes **stand washing**.

**2 Qualities,** 15c unbleached, 25c bleached

**FREE.**—If the "M" waists are not for sale in your town, send us your dealer's name and 6c U. S. postage and we will send sample waist, 25c quality, free. Statesize wanted

**MINNEAPOLIS KNITTING WORKS,**

800 Bryant Avenue, MINNEAPOLIS, MINN.

## Weak Eyes Made Strong

### Sight Restored at Small Expense.

Dr. W. O. Coffee, the Des Moines, Iowa, oculist, has discovered remedies that not only prevent blindness in every case, when used in time, but restore sight to those partially or completely blind from cataracts, granulated lids, scums, opacities, films and all inflammations of the eyes, or eye strains. He has published a splendid book, with colored photographs from life, illustrating all eye diseases, so you can see your own case. It tells how you can cure yourself at home by his absorption treatment at small expense. Dr. Coffee will send this book **FREE** to all who are afflicted with eye trouble and write him. Ask for the "Eye Book."

Address \_\_\_\_\_

**DR. W. O. COFFEE,**  
1001 Good Blk., Des Moines, Iowa.

### FLOWERS PEEPING OUT OF UNLIKELY SPOTS

Give a surprise of pleasure. Therefore stick in a flower just where it would not be expected. No matter if it "was never done before," or if "people don't do so in these parts," or if "flowers are a trouble and don't bring any money." They bring what money often fails to bring—refinement and pleasure.

### 30 U. S. AND FOREIGN Cancelled Stamps

SENT FOR 5 CENTS.

Address **B. E. NEEDHAM,**

319 Sixth Street South.

Minneapolis, Minn.

### FLOWER SEEDS

...FOR...

#### FALL SOWING.

Alyssum	Gloxinia
Asparagus	Hollyhocks
Daisy, Bellis	Mignonette
Candy Tuft	Pansy
Carnation, Marguerite	Primula
Centaurea, Margaritae	Smilax
Cineraria	Stocks
Cyclamen	Thunbergia
Verbena	



# SIX MONTHS FOR 25 CENTS

## A ROSE PLANT FREE

For only twenty-five cents we will send our splendid magazine, **Home and Flowers**, six months on trial—regular price One Dollar a year. We will give, absolutely free, a splendid rose plant, worth 10 cents, to every person who answers this advertisement. This remarkably liberal offer will be good for a limited time only.

### LEARN TO GROW FLOWERS AND LET THEIR FRAGRANCE BLESS YOUR HOME

**H**OME AND FLOWERS is devoted to the world beautiful. Its columns tell you how to grow flowers, Nature's sweetest gift to man. This splendid magazine is the only publication of the kind. It gives the fullest information in regard to home floriculture in all its phases—tells you exactly what to do, when to do it and how to do it in order to make flowers grow and bloom. Every article published is the record of the actual experience of some one who grows flowers successfully. By reading it you learn that which it would take you years to acquire through your own experiments. The best varieties, the time to plant, how to plant, the best fertilizers, the amount of water and heat needed, how and when to prune, and similar topics are fully treated. Especial attention is paid to the proper planting of lawns and home grounds, and to the arrangement of flowers. HOME AND FLOWERS is the recognized organ and exponent of the movement for town, village and neighborhood improvement, and its pages contain much valuable information about the wide-spread development of civic beauty.

### A Rose Plant GIVEN AWAY With Every Trial Subscription

We aim to help make the world better through the fragrance of flowers, and desire our friends not only to read about flowers, but to grow them. The rose is acknowledged "Queen of Flowers," and largely this is true because of its easy culture. Every person who sends us twenty-five cents for a six months' trial subscription for HOME AND FLOWERS will be given free a choice rose plant. This rose will be of a variety especially adapted to your climate, and could not be bought for less than ten cents—many florists charge twenty-five cents for such plants. When requested, the rose will be held for shipment until May 1. Unless definite request to hold it until that date has been made, the plant will be shipped at once. Postage prepaid.



### YOUR OWN MAGAZINE AND PLANT FREE, GET YOUR NEIGHBORS TO JOIN YOU.

Get four of your friends to accept the above offer, send us their names and addresses, accompanied by one dollar, and we will give you HOME AND FLOWERS and the rose plant free of all cost. Remember, our magazine six months on trial for twenty-five cents, and with a choice rose plant free to every subscriber. Address

**THE FLORAL PUBLISHING CO., 100 Citizens Bank Bldg., Springfield, Ohio.**



# Four Paris Salon Pictures

Reproduced in colors from the  
original paintings of Edouard Bisson

## Free

with Fairbank's  
Fairy Art Calendar  
1902—Fifth Year

Ten Oval Fronts cut from FAIRY  
Soap Cartons will secure the Calendar  
and the Four Art Supplements.

FAIRY Soap costs only 5 cents  
a cake. The Calendar and Four  
Pictures would readily command  
\$1.00 in Art Stores.

You can get all FREE by buying  
10 cakes of FAIRY, the best Floating  
White Soap made, and sending us the  
Ten Oval Fronts, or you can have the  
Calendar and Art Supplements by send-  
ing us twelve 2-cent stamps.

We prefer you should send the FAIRY  
Oval Fronts. You will if you once try  
FAIRY Soap.

## The FREE PICTURES

are faithful reproductions in colors of  
paintings by the world renowned French  
Artist, Edouard Bisson.

The subjects are "La Fiancee,"  
"Satania," "L'Echo," and "Printanea."  
They are exquisite figure compositions,  
the beauty of which can only be sug-  
gested by the accompanying illustra-  
tions. They are the same size as the  
Calendar, 10¼ x 13½ inches, on heavy  
plate stock, without lettering to mar  
their beauty.

Send the 10 oval fronts or the twelve  
two-cent stamps to Department Y. H.

The N. K. Fairbank Company  
Chicago.

Fits every  
hand  
Fit for any  
hand

